

THIS OPINION WAS NOT WRITTEN FOR PUBLICATION

The opinion in support of the decision being entered today (1) was not written for publication in a law journal and (2) is not binding precedent of the Board.

Paper No. 25

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES

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Ex parte DANIEL E. KLAS and WILLIAM J. ROSE

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Appeal No. 1998-0512  
Application No. 08/477,238

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HEARD: March 7, 2000

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Before KRASS, BARRETT, and GROSS, Administrative Patent Judges.  
GROSS, Administrative Patent Judge.

DECISION ON APPEAL

This is a decision on appeal from the examiner's final rejection of claims 11 through 27, which are all of the claims pending in this application.

Appellants' invention relates to an apparatus for reducing crosstalk in a connector circuit for a communications system. In particular, first and third conductive paths and second and fourth conductive paths are capacitively coupled

through a solid dielectric substrate. Claim 22 is illustrative of the claimed invention, and it reads as follows:

22. An apparatus for reducing crosstalk in a connector circuit for communications systems, comprising:

means for applying first and second pairs of substantially equal and opposite electrical signals to an electrical connector having first, second, third and fourth primary terminals arranged in a first ordered array with the second and third primary terminals being between the first and fourth primary terminals, having first, second, third and fourth secondary terminals arranged in a second ordered array, and having circuit means for electrically coupling the first, second, third and fourth primary terminals to the first, second, third and fourth secondary terminals, respectively, by first, second, third and fourth conductive paths on a solid dielectric substrate connecting and connected to the first, second, third and fourth terminals, respectively;

means for applying the first pair of substantially equal and opposite electrical signals to the first and fourth primary terminals;

means for applying the second pair of substantially equal and opposite electrical signals to the second and third primary terminals;

means for reactively coupling sections of the first and third paths through solid dielectric substrate to cancel crosstalk induced in the connector circuit; and

means for reactively coupling sections of the second and fourth paths through the solid dielectric substrate to cancel crosstalk induced in the connector circuit.

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The prior art references of record relied upon by the examiner in rejecting the appealed claims are:

Brownell et al. (Brownell)	5,299,956	Apr. 05, 1994 (filed Mar. 23, 1992)
Sato <sup>1</sup> (Japanese Kokai Patent Publication)	JP 2-268484	Nov. 02, 1990

Claims 11 through 27 stand rejected under 35 U.S.C. § 103 as being unpatentable over Brownell in view of Sato.

Reference is made to the Examiner's Answer (Paper No. 15, mailed September 2, 1997) for the examiner's complete reasoning in support of the rejections, and to appellants' Brief (Paper No. 14, filed August 4, 1997) for appellants' arguments thereagainst.

#### OPINION

We have carefully considered the claims, the applied prior art references, and the respective positions articulated by appellants and the examiner. As a consequence of our review, we will reverse the obviousness rejection of claims 11 through 27.

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<sup>1</sup> Our understanding of this reference is based upon a translation provided by the Translations Branch of the Patent and Trademark Office.

Claim 11 recites "reversing positions of portions of said second and third paths." None of the drawings of Brownell show reversing the locations of the second and third conductive paths. Brownell discloses in Figure 12 four primary and four secondary terminals connected by conductive paths wherein the positions of the first and fourth conductive paths are reversed between the two sets of terminals to couple the second and fourth and the first and third conductive paths. However, the second and third conductive paths remain in the same positions.

Claim 11 further recites spacing sections of the first and third paths and also the second and fourth paths "with solid dielectric material to form a ... capacitive coupling therebetween." Although the conductive paths of Brownell inherently are capacitively coupled, all of the conductive paths are on the same side of the substrate. In other words, Brownell does not disclose placing the conductive paths on both sides of a dielectric substrate (as implied by "spaced with solid dielectric material") to capacitively couple them through the substrate.

The examiner apparently recognizes that Brownell merely "shows the basic claimed invention showing rerouting and altering spacing between conductor traces on a circuit board" (Final Rejection, page 2) and, therefore, turns to Sato. The examiner states (Final Rejection, page 2) that Sato "shows and discloses specific through-board crossovers and ... states that the magnetic fluxes are segated [sic] by particular adjacent circuit sections." The examiner concludes that it would have been obvious to modify Brownell "by providing the more sophisticated cross talk-reduction circuitry of ... [Sato] to achieve the desired working range of acceptable radioactive [sic, radiative] noise reduction."

In a rejection under 35 U.S.C. § 103, it is incumbent upon the examiner to establish a factual basis to support the legal conclusion of obviousness. See In re Fine, 837 F.2d 1071, 1074, 5 USPQ2d 1596, 1598 (Fed. Cir. 1988). In so doing, the examiner is required to provide a reason from some teaching, suggestion or implication in the prior art as a whole, or knowledge generally available to one of ordinary skill in the art, why one having ordinary skill in the pertinent art would have been led to modify the prior art to

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arrive at the claimed invention. Uniroyal, Inc. v. Rudkin-Wiley, 837 F.2d 1044, 1052, 5 USPQ2d 1434, 1438 (Fed. Cir. 1988), cert. denied, 488 U.S. 825 (1988). These showings by the examiner are an essential part of complying with the burden of presenting a prima facie case of obviousness. Note In re Oetiker, 977 F.2d 1443, 1445, 24 USPQ2d 1443, 1444 (Fed. Cir. 1992). Furthermore, "[t]hat knowledge can not come from the applicant's invention itself." Oetiker, 977 F.2d at 1447, 24 USPQ2d at 1446.

We find no teaching or suggestion in Sato as to why one of ordinary skill in the art would have been led to modify Brownell to capacitively couple the conductive paths through a solid dielectric material. In the Answer (pages 5-6), the examiner asserts that

the prior art shows the general nature of how reactive and inductive capacitance can be altered, utilizing claimed techniques such as crossovers at right angles, pathways with above and below board traces.... [O]ne of ordinary skill in the art, given those teachings, would recognize the advantages of reduction in crosstalk commensurate with testing of these known principles.

The examiner's reasoning seems to lack any basis in the prior art, and appears to be no more than a statement that Brownell

could be modified to meet the claimed invention. Merely that the prior art can be modified in the manner suggested by the examiner does not make the modification obvious unless the prior art suggested the desirability of the modification. In re Fritch, 972 F.2d 1260, 1266, 23 USPQ2d 1780, 1783-4 (Fed. Cir. 1992). Thus, the examiner has failed to establish a prima facie case of obviousness. Accordingly, we must reverse the rejection of claim 11 and its dependents, claims 12 through 14.

The remaining independent claims, 15, 17, and 22, recite that the first and third and the second and fourth conductive paths are capacitively or reactively coupled "through" a dielectric substrate. The examiner states (Answer, page 7) that "[t]he phrase through the board does not require couplings from one side of the board to the other side of the board." We disagree. The word "through" conventionally means from one side or surface to the other. Further, claims are to be interpreted in light of the specification, and "through the board" is clearly shown in the figures and disclosed in the accompanying specification as meaning from one side or surface to the other. Additionally, as explained supra, we find no

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suggestion in the prior art to modify Brownell to include such couplings through a dielectric substrate. Consequently, we must reverse the rejection of claims 15, 17, and 22 and their dependents, claims 16, 18 through 21, and 23 through 27.

CONCLUSION

The decision of the examiner rejecting claims 11 through 27 under 35 U.S.C. § 103 is reversed.

REVERSED

ERROL A. KRASS	)	
Administrative Patent Judge	)	
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	)	
	)	
	)	BOARD OF PATENT
LEE E. BARRETT	)	APPEALS
Administrative Patent Judge	)	AND
	)	INTERFERENCES
	)	
	)	
	)	
ANITA PELLMAN GROSS	)	
Administrative Patent Judge	)	



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